

REMARKS

By the present amendment, claim 1 has been amended to replace “at least one first authentication element” by “a first authentication element,” which provides proper antecedent basis for the later recitation of “the first authentication element” without changing the scope of the claim.

It is submitted that the amendment is formal only and does not raise any new issues. Accordingly, entry and consideration of the amendment is respectfully requested.

Claims 1-22 are pending in the present application. Claims 1 and 22 are the only independent claims.

I. Objections

In the Office Action, claims 1, 4, 6, and 8 are objected to. It is alleged in the Office Action that the expression “the first authentication element” lacks proper antecedent basis because claim 1 introduces this element as “at least one first authentication element.”

Claim 1 has been amended to replace “at least one first authentication element” by “a first authentication element,” which also provides antecedent basis for the later recitation of “the first authentication element” without changing the scope of the claim. Accordingly, it is submitted that the objection should be withdrawn.

II. Art rejections

In the Office Action, claims 1-10 and 12-21 are rejected under 35 U.S.C. 103(a) as obvious over US 5,961,432 to Murakami et al. (“Murakami’432”) in view of US 5,565,276 to Murakami et al. (“Murakami’276”).

Further, claim 11 is rejected under 35 U.S.C. 103(a) as obvious over Murakami'432 in view of Murakami'276 and further in view of "Nordic Pulp and Paper Research".

In this Office Action, it is alleged that in Murakami'432, "although the ply 3 is provided as a window (in regards to its transparency) it is not simply an opening and therefore also non-zero in thickness" (Office Action at page 7, last paragraph). Reference is made in the Office Action to the Abstract and col. 2, lines 50-62 of Murakami'432, and it is alleged in the Office Action that this corroborates conventional watermarking in which the mark results from thickness differences that are visible when the paper is held up to the light.

Applicant urges reconsideration and withdrawal of the rejections. The "watermark" to which Murakami'432 refers concerns what is seen in the laminate (plies 3+4) of Murakami'432 in the area where a window is provided in ply 3. The ply 3 of Murakami'432 clearly has a zero thickness in the window area, so that it would be completely impossible to provide a watermark in the ply 3 in the window area.

Specifically, the abstract of Murakami'432 describes "window portions" formed in the outermost layer, in which "are formed watermarks of letters or pictures." The abstract also states that the thread "is exposed at these window portions."

Further, the passage at col. 2, lines 50-62 of Murakami'432 uses the same expressions (emphasis added):

The inventors have found that the above problem can be solved by
providing in the paper surface **window portions of particular size**
whose paper thickness is reduced and inserting a thread so

that it is exposed in these window portions. With this method, however, when the paper is held to the light, the windows as a whole look white and transparent giving unnatural impressions. The inventors conducted further research and found that this drawback can be eliminated by watermarking letters or pictures in the window portions and that restrictions on the printing design can be eliminated by forming both the “thread-inserted window” portions and the “watermarked” portions in the same locations in the paper.

Thus, it is clear from these passages of Murakami’432 that the expression “window portions... whose paper thickness is reduced” must be understood as meaning that the thickness of the multiply paper as a whole is reduced. In other words, when a “window” is formed in one ply, this does not mean that the “window” has a reduced thickness, but a window conventionally has a zero-thickness such that a “window portion of reduced thickness” is formed in the laminate. This is confirmed by the expression “thread... is exposed in these window portions. Namely, if the windows formed in one ply of Murakami’432 were non-zero thickness, then the thread would not be “exposed.”

The illustrative embodiment of Murakami’432 also confirms this interpretation. Fig. 2 of Murakami’432 shows windows with no material in the window area of ply 3, so that the thickness of the whole paper is of course reduced. The “watermarks 2” are areas of non-zero thickness that are provided within the “window portion of reduced thickness” formed by ply 4

only (since ply 3 has a zero-thickness in that location to expose the watermark) and attached only to the other ply 4.

The description at col. 5, lines 19-24 of Murakami'432 confirms that the windows in ply 3 have a zero thickness (emphasis added):

That is, the outermost paper layer 3 deposited on the cylinder 12a having the molds 13 is formed with **window portions 1 that are not deposited with paper stock** at locations corresponding to the molds 13 and in which are formed watermarks 2 of letters or pictures deposited with the paper stock.

In summary, Murakami'432 does not suggest two fibrous paper plies with respective authentication elements in regions of non-zero thickness of the respective plies, as recited in present claim 1, let alone a reinforcing element in the second ply that is absent from the first ply.

In addition, Murakami'276 does not suggest providing different authentication elements in different layers. In particular, since the first anti-falsification means of Murakami'276 is provided in a single layer, and Murakami'276 is silent regarding providing different anti-falsification means in different layers, it is submitted that the person of the art would provide the "other anti-falsification means" discussed at col. 7, lines 10-13 of Murakami'276 in the same layer as the first anti-falsification means. Therefore, a person of ordinary skill in the art would not find any motivation in Murakami'276 to modify Murakami'432, and even if arguendo, a person of the art were motivated to attempt a combination of Murakami'432 and '276 (which is

denied), this would not result in the presently claimed invention because all anti-falsification means would be in the same layer.

Specifically, as explained previously, Murakami'432 clearly provides both the watermark and the indicia to its lower ply 4, whereas the ply 3 is only provided with an opening or window to view the watermark and/or indicia of ply 4. Accordingly, the person of ordinary skill in the art would not have been motivated to modify Murakami'432 contrary to the teaching of Murakami'276, but that person would have provided the reinforcement and the anti-falsification elements of Murakami'276 to the same ply 4 of Murakami'432. As a result, any combination of Murakami'432 and '276 would not have resulted in the presently claimed invention. Therefore, the present claims are not obvious over Murakami'432 taken alone or in any combination with Murakami'276.

In addition, with respect to the dependent claims, it is submitted that the combined features recited in these respective claims are not taught or suggested in the cited references. Therefore, each of these respective claims is not anticipated by, and not obvious over, the cited references taken alone or in any combination.

In view of the above, it is submitted that the rejections should be withdrawn.

Conclusion

In conclusion, the invention as presently claimed is patentable. It is believed that the claims are in allowable condition and a notice to that effect is earnestly requested.

Application No. 10/575,367
Art Unit: 3725

Amendment under 37 CFR §1.116
Attorney Docket No.: 062402

If there is, in the Examiner's opinion, any outstanding issue and such issue may be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

If this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of the response period. Please charge the fee for such extension and any other fees which may be required to Deposit Account No. 50-2866.

Respectfully submitted,
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